

CLAIMS

WE CLAIM:

1. A disconnect mechanism for a fuse block receiving power connections and of a type having a support face for mounting on a panel with one or more fuse sockets accessible on a front face of the fuse block opposite the support face and with an extending rotary operator, an outer end of the rotary operator adapted to receive a portion of a door-mounted knob and rotating in a first direction to connect the fuses with the power connections, and rotating in a second direction to disconnect the fuses from the power connections, the improvement comprising:
 - a rotatable handle configured to receive the outer end of the rotary operator, the handle including:
 - (a) a housing;
 - (b) a first coupling mechanism that is releasably connected between the operator and the housing, wherein the first coupling mechanism rotates the operator in the first and second directions in response to rotation of the handle in the first and second directions when the first coupling mechanism is connected; and
 - (c) a second coupling mechanism that is connected between the operator and the housing, wherein the second coupling mechanism includes an engagement member that rotates the operator in the second direction when the handle is rotated in the second direction and does not rotate the operator when the handle is rotated in the first direction.
2. The disconnect mechanism as recited in claim 1, wherein the first coupling mechanism includes a hub disposed in the housing that is inwardly depressible relative to the housing to interlock with the housing with respect to rotational motion.
3. The disconnect mechanism as recited in claim 2, wherein the hub includes at least one protrusion that interlocks with at least one corresponding recess in the housing when the hub is depressed.
4. The disconnect mechanism as recited in claim 2, wherein the interlock is disengaged when the hub is not depressed.

5. The disconnect mechanism as recited in claim 4, further comprising a spring member that biases the hub outwardly.

6. The disconnect mechanism as recited in claim 2, wherein the door depresses the hub when the door is closed.

7. The disconnect mechanism as recited in claim 2, wherein the door includes an engaging member that depresses the hub when the door is closed.

8. The disconnect mechanism as recited in claim 1, wherein the second coupling mechanism includes a first rotating member that is rotatably coupled to the housing and a second member that is rotatably coupled to the operator, wherein the second member is rotatably coupled to the first member with respect to rotation of the first member in the second direction.

9. The disconnect mechanism as recited in claim 8, wherein the first rotating member further comprises a sprocket having an outwardly extending tooth.

10. The disconnect mechanism as recited in claim 9, wherein the second rotating member is a disc that defines at least one aperture defining a surface configured to engage the tooth.

11. The disconnect mechanism as recited in claim 10, wherein the tooth is angled with respect to the second rotating member and cams over the surface when the first rotating member is rotated in the first direction, and wherein the tooth engages the surface when the first rotating member is rotated in the second direction.

12. A handle for a fuse block receiving power connections and of a type having a support face for mounting on a panel with one or more fuse sockets accessible on a front face of the fuse block opposite the support face and with an extending rotary operator, an outer end of the rotary operator adapted to receive a portion of a door-mounted knob and rotating to disconnect the fuses from the power connections, the handle comprising:

(a) a housing;

(b) a first coupling mechanism that is releasably connected between the operator and the housing, wherein the first coupling mechanism rotates the operator in the first and second directions in response to rotation of the handle in the first and second directions when the first coupling mechanism is connected; and

(c) a second coupling mechanism that is connected between the operator and the housing, wherein the second coupling mechanism includes an engagement member that rotates the operator in the second direction when the handle is rotated in the second direction and does not rotate the operator when the handle is rotated in the first direction.

13. The disconnect mechanism as recited in claim 12, wherein the first coupling mechanism includes a hub disposed in the housing that is inwardly depressible relative to the housing to interlock with the housing with respect to rotational motion.

14. The disconnect mechanism as recited in claim 13, wherein the hub includes at least one protrusion that interlocks with at least one corresponding recess in the housing when the hub is depressed.

15. The disconnect mechanism as recited in claim 13, wherein the interlock is disengaged when the hub is not depressed.

16. The disconnect mechanism as recited in claim 15, further comprising a spring member that biases the hub outwardly.

17. The disconnect mechanism as recited in claim 13, wherein the door depresses the hub when the door is closed.

18. The disconnect mechanism as recited in claim 12, wherein the second coupling mechanism includes a first rotating member that is rotatably coupled to the housing and a second member that is rotatably coupled to the operator, wherein the second member is rotatably coupled to the first member with respect to rotation of the first member in the second direction.

19. The disconnect mechanism as recited in claim 18, wherein the first rotating member further comprises a sprocket having an outwardly extending tooth.

20. The disconnect mechanism as recited in claim 19, wherein the second rotating member is a disc that defines at least one aperture defining a surface configured to engage the tooth.

21. The disconnect mechanism as recited in claim 20, wherein the tooth is angled with respect to the second rotating member and cams over the surface when the first rotating member is rotated in the first direction, and wherein the tooth engages the surface when the first rotating member is rotated in the second direction.

22. A handle usable in combination with a handle-operated device of the type including an outwardly extending operator that is rotatable in a first direction and in a second, opposite direction, the handle comprising:

(a) a housing;

(b) a first coupling mechanism that is releasably connected between the operator the housing, wherein the first coupling mechanism rotates the operator in the first and second directions in response to rotation of the handle in the first and second directions when the first coupling mechanism is connected; and

(c) a second coupling mechanism that is connected between the operator and the housing, wherein the second coupling mechanism includes an engagement member that rotates the operator in the second direction when the handle is rotated in the second direction and does not rotate the operator when the handle is rotated in the first direction.

23. The disconnect mechanism as recited in claim 22, wherein the first coupling mechanism includes a hub disposed in the housing that is inwardly depressible relative to the housing to interlock with the housing with respect to rotational motion.

24. The disconnect mechanism as recited in claim 23, wherein the hub includes at least one protrusion that interlocks with at least one corresponding recess in the housing when the hub is depressed.

25. The disconnect mechanism as recited in claim 23, wherein the interlock is disengaged when the hub is not depressed.

26. The disconnect mechanism as recited in claim 25, further comprising a spring member that biases the hub outwardly.

27. The disconnect mechanism as recited in claim 23, wherein the door depresses the hub when the door is closed.

28. The disconnect mechanism as recited in claim 23, wherein the door includes an engaging member that depresses the hub when the door is closed.

29. The disconnect mechanism as recited in claim 22, wherein the second coupling mechanism includes a first rotating member that is rotatably coupled to the housing and a second member that is rotatably coupled to the operator, wherein the second member is rotatably coupled to the first member with respect to rotation of the first member in the second direction.

30. The disconnect mechanism as recited in claim 29, wherein the first rotating member further comprises a sprocket having an outwardly extending tooth.

31. The disconnect mechanism as recited in claim 30, wherein the second rotating member is a disc that defines at least one aperture defining a surface configured to engage the tooth.

32. The disconnect mechanism as recited in claim 31, wherein the tooth is angled with respect to the second rotating member and cams over the surface when the first rotating member is rotated in the first direction, and wherein the tooth engages the surface when the first rotating member is rotated in the second direction.